## What is claimed is:

- 1. A radiation source comprising an anode and a cathode that are configured and arranged to create a discharge, within a discharge element, in a substance in a discharge space between said anode and said cathode to form a plasma so as to generate electromagnetic radiation, said radiation source comprising a plurality of discharge elements.
- 2. A radiation source according to claim 1, wherein each discharge element is movable in line with an optical axis of an apparatus with which said radiation source operates.
- 3. A radiation source according to claim 1, wherein said discharge elements are arranged around a rotation axis of said radiation source.
- 4. A radiation source according to claim 1, wherein the anode of a first discharge element is movable in line with the cathode of a second discharge element.
- 5. A radiation source according to claim 1, wherein at least part of each discharge element is brought in contact with a liquid before initiating a discharge in said element so as to cover internal surfaces of said element with said liquid.
- 6. A radiation source comprising an anode and a cathode that are configured and arranged to create a discharge in a substance in a discharge space between said anode and said cathode to form a plasma so as to generate electromagnetic radiation, said radiation source comprising a triggering device configured to initiate said discharge by irradiating a surface proximate said discharge space with an energetic beam.
- 7. A radiation source according to claim 6, wherein said energetic beam is a beam of electromagnetic radiation.

- 8. A radiation source according to claim 7, wherein said energetic beam is a laser beam.
- 9. A radiation source according to claim 6, wherein said energetic beam is a beam of charged particles.
- 10. A radiation source according to claim 6, wherein said energetic beam irradiates an area on the surface of an anode.
- 11. A radiation source according to claim 6, wherein said energetic beam irradiates an area on the surface of an anode adjacent to an emission aperture.
- 12. A radiation source according to claim 6, wherein said energetic beam irradiates an area on the surface of a cathode.
- 13. A radiation source according to claim 6, wherein said energetic beam irradiates a target structure adjacent to a discharge area.
- 14. A radiation source according to claim 13, wherein said target structure comprises an element selected from the group consisting of: xenon (Xe), tin (Sn), lithium (Li), indium (In) and iridium (Ir).
- 15. A radiation source according to claim 13, wherein said target structure forms part of said cathode.
- 16. A radiation source according to claim 13, wherein said target structure forms part of said anode.
- 17. A radiation source according to claim 13, wherein the target structure is electrically isolated from said cathode.

- 18. A radiation source according to claim 13, wherein the target structure is electrically isolated from said anode.
- 19. A radiation source according to claim 6, wherein the surface irradiated by said energy beam comprises a wicking structure configured to transport a liquid towards said discharge space from a liquid reservoir in contact with said wicking structure.
- 20. A radiation source according to claim 19, wherein the wicking structure comprises structures leaving spaces therebetween so as to transport said liquid by capillary forces.
- 21. A radiation source according to claim 20, wherein said wicking structure comprises a regular arrangement of substantially cylindrical structures.
- 22. A radiation source according to claim 20, wherein said wicking structure comprises a regular arrangement of substantially spherical structures.
- 23. A radiation source according to claim 19, wherein the radiation source further comprises a pressurizer to exert a pressure upon the liquid within the wicking structure.
- 24. A radiation source according to claim 23, wherein the pressurizer is configured to exert the pressure in a pulsed fashion.
- 25. A radiation source according to claim 5, wherein said liquid comprises an element selected from the group consisting of: xenon (Xe), tin (Sn), lithium (Li), indium (In) and iridium (Ir).
- 26. A radiation source according to claim 19, wherein said liquid comprises an element selected from the group consisting of: xenon (Xe), tin (Sn), lithium (Li), indium (In) and iridium (Ir).

- 27. A method for operating a radiation source, constructed to have a low inductance, and comprising an anode and a cathode that are configured and arranged to create a discharge in a substance in a discharge space between said anode and said cathode to form a plasma so as to generate electromagnetic radiation, said method comprising generating an initial discharge followed by operating said radiation source so as to allow successive discharges to occur due to a substantially self-regulated oscillation within said discharge source.
- 28. A radiation source according to claim 27, wherein material for discharge is provided by evaporation at the site of a cathode spot.
- 29. A radiation source according to claim 28, wherein said initial discharge is initiated by increasing the current through said cathode spot.
- 30. A radiation source according to claim 27, wherein said initial discharge is initiated by irradiating a surface proximate said discharge space with an energetic beam.
- 31. A radiation source according to claim 27, wherein said successive discharges are initiated by irradiating a surface proximate said discharge space with an energetic beam.
  - 32. A lithographic projection apparatus comprising:

a radiation source comprising an anode and a cathode that are configured and arranged to create a discharge, within a discharge element, in a substance in a discharge space between said anode and said cathode to form a plasma so as to generate a projection beam of radiation, said radiation source comprising a plurality of discharge elements;

- a support structure configured to hold a patterning device, the patterning device configured to pattern the projection beam according to a desired pattern;
  - a substrate table configured to hold a substrate; and
- a projection system configured to project the patterned beam onto a target portion of the substrate.

- 33. A lithographic projection apparatus according to claim 32, wherein each discharge element is movable in line with an optical axis of an apparatus with which said radiation source operates.
- 34. A lithographic projection apparatus according to claim 32, wherein said discharge elements are arranged around a rotation axis of said radiation source.
- 35. A lithographic projection apparatus according to claim 32, wherein the anode of a first discharge element is movable in line with the cathode of a second discharge element.
  - 36. A lithographic projection apparatus comprising:

a radiation source comprising an anode and a cathode that are configured and arranged to create a discharge in a substance in a discharge space between said anode and said cathode to form a plasma so as to generate a projection beam of radiation, said radiation source comprising a triggering device configured to initiate said discharge by irradiating a surface proximate said discharge space with an energetic beam;

a support structure configured to hold a patterning device, the patterning device configured to pattern the projection beam according to a desired pattern;

a substrate table configured to hold a substrate; and

a projection system configured to project the patterned beam onto a target portion of the substrate.

- 37. A lithographic projection apparatus according to claim 36, wherein said energetic beam irradiates an area on the surface of an anode.
- 38. A lithographic projection apparatus according to claim 36, wherein said energetic beam irradiates an area on the surface of an anode adjacent to an emission aperture.
- 39. A lithographic projection apparatus according to claim 36, wherein said energetic beam irradiates an area on the surface of a cathode.

- 40. A lithographic projection apparatus according to claim 36, wherein said energetic beam irradiates a target structure adjacent to a discharge area.
- 41. A lithographic projection apparatus according to claim 36, wherein the surface irradiated by said energy beam comprises a wicking structure configured to transport a liquid towards said discharge space from a liquid reservoir in contact with said wicking structure.

## 42. A device manufacturing method comprising:

providing a projection beam of radiation using a radiation system comprising a radiation source comprising an anode and a cathode that are configured and arranged to create a discharge, within a discharge element, in a substance in a discharge space between said anode and said cathode to form a plasma so as to generate a projection beam of radiation, said radiation source comprising a plurality of discharge elements;

using a patterning device to endow the projection beam with a pattern in its crosssection;

projecting the patterned beam of radiation onto a target portion of a substrate.

# 43. A device manufacturing method comprising:

providing a projection beam of radiation using a radiation system comprising a radiation source comprising an anode and a cathode that are configured and arranged to create a discharge in a substance in a discharge space between said anode and said cathode to form a plasma so as to generate a projection beam of radiation, said radiation source comprising a triggering device configured to initiate said discharge by irradiating a surface proximate said discharge space with an energetic beam;

using a patterning device to endow the projection beam with a pattern in its crosssection;

projecting the patterned beam of radiation onto a target portion of a substrate.